Software Engineering Project

**Postgraduate (Student & Management System)**

**Prepared by**

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Note In the last version  **the** Contents will complete

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**1. Introduction**

* 1. **choose leader**

All member in our team agree to make Mahmoud a leader. he has experience to manage and lead the team based on the acknowledge in some language that show in last column of table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | **Computer language 1** | **Database** | **Software** | **Network** | language |
| **Mahmoud Abdallah Sharaf Al-den** | **100** | **92** | **79** | **76** | C++ java /web /android |
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| **Mohammed Ahmed Mahmoud Shalaby** | **60** | **55** | **58** | **50** | java /web /android |
| **Micheal Jack William** | **66** | **54** | **55** | **51** | java /web |
| **Mohammed Ahmed Sheha** | **59** | **66** | **61** | **50** | java /web |
| **Fadi Musaad Refaay** | **64** | **62** | **60** | **55** | java /web |

**1.2 Objective**

**‘‘Postgraduate’’** basically is a two-perspective student & lecturer or management with a database that stores details about every student, all subject that can choose between them and all data about doctor or management in a one place. basically like a social network allow to student to registration on the page. lecturer can look to all data and determined all student that success after interview and Specify a valid mark on the specific field of acceptance on his profile.

**1.3 Document Conventions** This document follows MLA (Modern Language Association) Format. The bold-faced text has been used to emphasize section and sub-section headings. Highlighting is to point out words in the glossary and italicized text is used to label and recognize diagrams. Times New Roman Font used for headings and Arial font used for regular text.

**1.4 Intended Audience** This document is to be read by the development team, the project managers, marketing staff, testers and documentation writers. Our stakeholders, Student and management staff, any user who is Holds a graduation certificate

**2. Requirements**

**2.1 User Requirement**

1. The Postgraduate system shall provide full authentication system with registration and login.

2. Student shall fill his form via his account.

3. Staff reviews student papers.

4. Doctor look for report and state student status.

**2.2 Systems Requirements**1.1. When the user presses the login button the system shall validate user’s data and check whether the email and password are valid.  
1.2. When the user presses the signup button the system shall check if the email is

found on Database or not and if found, back to the user and ask him/her to write another email.

1.3. If all data entered in the form is valid then the student or lecturer account added to the system database.

2.1. if data is valid then his form is stored temporary.

3.1. Staff reviews student papers whose paper status is in reviewing

3.2. Staff check if there is missing or invalid data.

3.3 if the data is valid and papers are correct then his paper status is accepted

3.4 Staff send a report for student whose paper status is accepted.

4.1. Doctor look for report that is sent by staff

4.2 Doctor accept or refuse student via student status

**2.3 Functional Requirements  
2.3.1 Login**

**Description:** This function allows a registered student or lecturer to log in account using his email and password. If a student or lecturer is not registered, the application shall allow the student or lecturer to enroll first.  
 **Inputs:** email and password and account type whether lecturer or regular student.  
 **Source:** All inputs are provided by the student.  
 **Outputs:** Indication that the student is logged in to the system.  
 **Destination:** The outputs are displayed on the screen as well as stored in the system.  
 **Action:** The system will check both the email and password when a student attempt to log in. If a student is not registered, the application shall allow the student to enroll first. After validation, if all data is valid the system will check the account type selected and search in the specified type table in the database  
 **Requires:** The student provides login information including email and password and specify account type.   
 **Pre-Conditions:** student is not logged in to the system. The student has previously enrolled in system.  
 **Post-Conditions:** student is logged in to the system, OR the student is not logger in

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because he/she entered unrecognized information.

**Side-Effects:** None  
 **Tabular Specification:**

|  |  |
| --- | --- |
| Condition | Action |
| Student entered correct email , Password  And account type | Student logged in the system |
| Invalid email , Password And account type | Student don’t logged in the system |

**2.3.2 Register  
Description:** This function allows unregistered student or lecturer and management staff to register and to create a new account with the application.  
**Inputs:** Required: Full name, email address and other data show in screen .  
**Source:** All inputs are provided by the student or lecturer from the registration form.  
**Outputs:** Indication that the student is logged in to the system and account created.  
**Destination:** The outputs are displayed on the screen as well as stored in the  
system.**Action:** To create a new account, the student has to provide required information such as full name, email address and password date of birth or for lecturer type account name, phone, email, password. The system checks if all required data are provided and then the system add a user to the corresponding table in the database  
**Requires:** provide required information such as full name, email address and password date of birth or for lecturer account type name, phone, email, password.  
**Pre-Conditions:** student is not registered in the system.  
**Post-Conditions:** A student account is created, and the student can access all the functionalities of the system  
**Side-Effects:** None  
**Tabular Specification:**

|  |  |
| --- | --- |
| Condition | Action |
| Student entered valid data in the form | Student logged in the system |
| Student entered invalid data in the form | Student don’t logged in the system |

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**2.4 Non-Functional Requirement  
2.4.1 Product requirement:**

1. The system shall be available all time for student or lecturer and both should be notified before any system maintenance time

2. The id for user or master shall not be more than 6-digits and should be unique

3.

**2.4.2 Organizational requirement:**

1. Any Student must have Holds a graduation certificate

**2.4.3 External requirement:**

1. Email and Password for student or lecturer shall be secure and encrypted.

**3. System modeling**

**3.1 System Use Case Diagram:** In a last version.

**3.2 Sequence diagram:** In a last version.

**3.3 Class Diagram:** In a last version.

**4. Architectural design  
4.1.1 The Model-View-Controller (MVC) Pattern  
4.1.2 Description:**• **The *model*** It directly manages the data, logic, and rules of the application.  
• **A *view*** Multiple views of the same information are possible, manages how the data is  
presented to the student  
• **the *controller***, manage student interaction and converts it to commands for the model or view  
**4.1.3 Why This Architecture**• Because there are multiple ways to view and interact with data.  
**4.1.4 Advantages:**• Allows the data to change independently of its representation and vice versa.  
• Supports presentation of the same data in different ways with changes made in one  
representation shown in all of them.  
**Performance**• We achieve the performance because we put all the important operations in small  
components.  
**Safety**• If we put all important functions in small components, it reduced costs and problems.  
**Availability**• We reduced the number of components because if one of the components has problems, the system wasn’t stopped.